

CLAIMS

What is claimed is:

1. A system for providing a covert warning notification of a hazard to an aircraft, comprising:
 - a detection system capable of detecting said hazard;
 - a transceiver capable of allowing said system to provide said covert warning to a location external from said aircraft;
 - a storage device;
 - a memory; and
 - a processor, configured by said memory to perform the steps of:
 - determining a category of radar system associated with a received signal;
 - determining a modulation scheme, based on said determined category of radar system, for displaying an array of icons on said location external from said aircraft, said array of icons providing said covert warning; and
 - using said received signal to provide said array of icons.
2. The system of claim 1, wherein said system further comprises a power regulator capable of putting said system in a sleep mode, where portions of said system do not receive full power.
3. The system of claim 1, further comprising a real-time convolver, wherein said icon display is provided by using said real-time convolver to take a real-time convolution of said received signal and transmitting said received signal and said real-time convolution of said received signal to said location external from said aircraft.
4. The system of claim 3, wherein said array of icons is a 3 x 3 array of icons.
5. The system of claim 1, further comprising a storage device, said storage device being capable of storing said received signal.

6. The system of claim 1, further comprising a delaying device capable of holding said received signal for a predetermined period of time.

7. The system of claim 1, wherein said hazard is a missile launched at said aircraft.

8. The system of claim 1, wherein said location external from said aircraft is a ground radar system.

9. A method of providing a covert warning notification of a hazard to an aircraft, comprising the steps of:

receiving a signal from a radar system;

determining a category of said radar system by analyzing a waveform associated with said received signal;

storing said waveform;

determining a modulation scheme for providing said covert warning notification to said radar system, wherein said modulation scheme is based on said analyzed waveform; and

transmitting said stored waveform and identification of said aircraft to said radar system.

10. The method of claim 9, further comprising the steps of:

determining if said signal received from said radar system is from a ground radar control system; and

providing power to a series of devices as a result of said radar system being a ground radar control system.

11. The method of claim 9, wherein said step of determining a category of said radar system further comprises the steps of:

determining a pulse rate frequency of said waveform;

determining a pulse rate interval of said waveform; and

comparing said determined pulse rate frequency of said waveform and said pulse rate interval of said waveform to a stored range of pulse rate frequencies and pulse rate intervals, resulting in said category of said radar system.

12. The method of claim 9, wherein said step of transmitting said stored waveform and identification of said aircraft to said radar system, further comprises the steps of:

determining signal transmission timing information of said radar system from said waveform;

determining a required identification time of said radar system;

transmitting said stored waveform to said radar system prior to receiving a second signal from said radar system;

transmitting said stored waveform and information regarding said aircraft to said radar system during said required identification time of said radar system; and

transmitting said stored waveform to said radar system after said required identification time of said radar system.

13. The method of claim 12, wherein said step of determining signal transmission timing information of said radar system further comprises the step of comparing said waveform to stored waveforms.

14. The method of claim 12, further comprising the steps of:

taking a real-time convolution of said stored waveform;

transmitting a real-time convolution of said stored waveform with said stored waveform during said step of transmitting said stored waveform to said radar system prior to receiving the second signal from said radar system;

transmitting a real-time convolution of said stored waveform with said stored waveform during said step of transmitting said stored waveform and information regarding said aircraft to said radar system during said required identification time of said radar system; and

transmitting a real-time convolution of said stored waveform with said stored waveform during said step of transmitting said stored waveform to said radar system after said required identification time of said radar system.

15. The method of claim 14, wherein a result of said radar system receiving said stored waveforms and said real-time convolutions of said stored waveforms, is a 3 x 3 icon matrix displayed by said radar system.

16. The method of claim 15, wherein a center icon within said 3 x 3 icon matrix is different from other icons within said 3 x 3 icon matrix, said center icon being a result of said step of transmitting said stored waveform and information regarding said aircraft to said radar system during said required identification time of said radar system.

17. The method of claim 9, where said hazard is a missile launched at said aircraft.

18. A method of providing a covert warning notification of a hazard to an aircraft, comprising the steps of:

transmitting a signal from a radar system to said aircraft, said signal being capable of being analyzed to determine a category of said radar system;

receiving at least one stored waveform associated with said transmitted signal and identification of said aircraft, from said aircraft; and

displaying said at least one stored waveform associated with said transmitted signal and said identification of said aircraft as an icon matrix associated with a modulation scheme selected by said aircraft.

19. The method of claim 18, further comprising the step of receiving at least one real-time convolution of said stored waveform from said aircraft.

20. The method of claim 18, wherein said step of receiving at least one stored waveform associated with said transmitted signal and identification of said aircraft, from said aircraft, further comprises the steps of:

receiving a real-time convolution of said stored waveform with said stored waveform prior to transmitting a second signal;

receiving a real-time convolution of said stored waveform, said stored waveform, and said information regarding said aircraft during said required identification time of said radar system; and

transmitting a real-time convolution of said stored waveform with said stored waveform during said step of transmitting said stored waveform to said radar system after said required identification time of said radar system.